Public Works (1910) Department.

G.O., No. 659

DATED 7/3/1910.

4810

[Despatch Abstract.]

Periyar-Pambiar Project

Recording letter from the Govt of India, Dept of Revenue and Agriculture, saying that the catchment area of the Pambiyar river as well as of the Periyar lake is ~~now~~ being triangulated and that the detail survey will be taken up and probably completed during the cold weather of 1910-11.

8/3.

Indd=

Indexed, 8/3/10

[P. W. 9. 1,250—22-7-09.]

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Government of Madras.

PUBLIC WORKS DEPARTMENT.

IRRIGATION.

Recd.	1910.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 65 I., 7th March 1910.

Periyar–Pambiyar Project

Recording letter from the Government of India, Department of Revenue and Agriculture, saying that the catchment area of the Pambiyar river as well as of the Periyár lake is being triangulated and that the detail survey will be taken up and probably completed during the cold weather of 1910–11.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

Read—the following papers:—

I

G.O., No. 4 I., dated 10th January 1910.

Abstract.—Ordered that a letter be despatched to the Government of India, Revenue and Agricultural Department, with a request to have the Pambiyar catchment surveyed by one of the Survey of India Parties.

II

Letter—from C. A. Innes, Esq., I.C.S., Under Secretary to the Government of India, Department of Revenue and Agriculture (Land Surveys).
To—the Joint Secretary to the Government of Madras, Public Works Department, Irrigation Branch.
Dated—Calcutta, the 19th February 1910.
No.—197—18-2.

In reply to your letter No. 5 I., dated the 10th January last, I am directed to say that the Government of India are informed by the Surveyor-General that the catchment area of the Pambiyar river as well as of the Periyár lake is now being triangulated and that the detail survey will be taken up and, it is hoped, completed during the cold weather of 1910–11.

Order—No. 65 I., dated 7th March 1910.

Recorded.

(True Extract.)

C. A. Smith,
Joint Secretary to Government, P. W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, Superintending Engineer, VI Circle.
Copy to the Revenue Department.

Forwarded to the

(By Order.)

Deputy Registrar.

1,000—26-5-08.

P.W.D., Irrigation Branch.

Subject :—

NOTES

CONNECTED WITH

G.O., No. I., dated 190 .

Notes edited.

Initials of the Clerk.

NOTES.

Periyar - Pambiyar Project — P.W.D. (I)

[C.No. 770] From the C.E. I. R.&A. Dept., No. 197 - 85 - 2 d 19.2.10

D. S.

A draft G.O. is put up. It may be sent to Revenue for acceptance

24-2-10

24-2-10

To circulate to H.S. H.M.'s.

Copy cir. to HEIN ...

Frt. No. in C.No. 770 d 25.2.10.

To Rev. u.o.

Revenue Dept

SECRETARY TO GOVERNMENT 26 FEB 1910 REVENUE DEPARTMENT

To Under Secy

The draft may, it is submitted, be accepted in Revenue

CRV 1.3.10.

Secy

2.3.10

3.3.10.

REVENUE - A 866A

Recd. 1-3-10
Regd. 28.2.10.
Rec. 28/2/10.

Revenue 866A [?]

3.3.10

P.W.D.I. u.o.

P.W.D. (I).

D.S.

The draft may now issue.

4-3-10

U.P.A. 4.3.10

CHIEF ENGINEER FOR IRRIGATION. 4 MAR 1910 Roc. 770/10

SUBJECT :—

PUBLIC WORKS DEPARTMENT,

IRRIGATION BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

I

G.O. No. 4-I d/ 10. 1. 10. (P)

II.

[C No. 770] From the Govt. of India

Rev: & Agr. Dept:, No. 197-18-2

d/ 19. 2. 10. (a)

3P

order 65 I d/ 7-3-10
P.S.

Recorded.

Issue

[illegible]
D.S.

S.

24.2.10

24-2-10

Issue

To

The Chief Engineer for Irrigation

Copy to the Revenue Dept.

S.E. VI ✓ Despd 21/3/10

2

No. 197-18-2.

CHIEF ENGINEER FOR IRRIGATION. 21 FEB 1910 No. 770/10

FROM

C. A. INNES, Esq., I.C.S.,

Under-Secretary to the Government of India,

Department of Revenue and Agriculture,

To

The Joint Secretary to the

Government of Madras,

Public Works Department.

Calcutta , *the* 19th February 1910.

(Land Surveys)

SIR,

In reply to your letter No. 5-I dated the 10th January last, I am directed to say that the Government of India are informed by the Surveyor General that the catchment area of the Pambiyar river as well as of the Periyar lake is now being triangulated and that the detail survey will be taken up and, it is hoped, completed during the cold weather of 1910-11.

I have the honour to be,

Sir,

Your most obedient servant,

CAInnes

Under-Secretary.

4

M.A.G.

2,000—29-4-09.

P.W.D. IRRIGATION BRANCH.

Subject :—

CURRENT FILE.

CHIEF ENGIN[EER]
FOR IRRIGA[TION]
22 FEB 1910
No.

Government of Madras.

PUBLIC WORKS DEPARTMENT.

IRRIGATION.
ESTABLISHMENT.

Recd. 1910. *Enclosures*

Reqd. *Spare copies*

G.O., No. 4 I., 10th January 1910.

Periyar-Pambiyar Project

Ordered that a letter be despatched to the Government of India, Revenue and Agricultural Department, with a request to have the Pambiyar catchment surveyed by one of the Survey of India Parties.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Establishment.

Read—the following papers :—

I

G.O., No. 226 I., dated 17th June 1908.

Abstract.—Forwarding to the Government of India, for information, a copy of the Proceedings of this Government, passing orders on the report showing the results of the Periyar-Pambiyar investigation.

II

G.O., No. 2176, Revenue, dated 7th August 1909.
G.O., No. 2903, Revenue, dated 22nd October 1909.

III

Letter—from Mr. L. M. Jacob, c.s.i., Secretary to the Government of India, Public Works Department (Civil Works—Irrigation).
To—the Joint Secretary to the Government of Madras, Public Works Department, Irrigation Branch.
Dated—Calcutta, the 8th December 1908.
No.—2207 I.

With reference to your endorsement No. 227 I., dated the 17th June 1908, forwarding a copy of the Madras Government Proceedings regarding the progress made into the investigation of the Pambiyar Scheme for supplementing the supply of water of the Periyar Reservoir, I am directed to forward, for information, a copy of a note, dated the 11th November 1908, by the Inspector-General of Irrigation, on the scheme and to request that if the Governor in Council has no objection, the recommendations made therein may be given effect to.

Enclosure.

Note on the Pambiyar scheme, for supplementing the supply of water to the Periyar reservoir, Madras Presidency, by Mr. J. BENTON, C.I.E., Inspector-General of Irrigation, dated 11th November 1908.

Verbal opinion.—When on tour in Madras the Chief Engineer showed me the report and surveys of Mr. S. B. Murray, Executive Engineer, which now form part of the papers submitted to the Government of India with the local Government's letter No. 227 I., dated 17th June 1908. The surveys were then incomplete and as I considered it necessary to finish them I did not write any formal note on the same; as far as I am now able to recollect I suggested as follows :—

(i) The advisability of surveys being made with the object of finding an offtake further upstream, which may serve to obviate the necessity for such a long tunnel, or for any tunnel at all. The report of the Executive Engineer proceeds on the assumptions that the dam site which he proposes on the Pambiyar is the only possible one, and to utilize it, that a 3-mile tunnel is unavoidable; the latter assumption is justified but apparently not the former one.

(ii) That it is very desirable to find an offtake and alignment, which will answer for an open channel, since tunnels are very costly.

(iii) That the tunnel 3 miles in length appears to be prohibitive in cost, and I therefore disadvised detailed surveys of this work being made.

For reasons given below the stoppage of survey of the 3-mile tunnel does not appear to be a matter for regret, but the same is not the case as regards the survey of water sheds and levels of rivers.

2. *Tract unsurveyed.*—The tract is understood to be a very dense forest, where survey work is unavoidably very slow on account of the clearance which have to be carried out. The Government maps are understood to have the words "dark impenetrable forest" written on the tract under consideration; I was informed when on tour that the field work had actually been executed by the Survey department, but that an unfortunate forest fire consumed the papers.

3. *Surveys required.*—The surveys required appear in my opinion to be those which, with the least amount of labour and expenditure, will serve to show the following :—

(i) Location of the main water sheds and levels of the lower portions of these in the portions where it may probably be desired to bring an open supply channel, or one with a moderate amount of tunnelling, across to the next valley.

(ii) Levels at intervals of the Pambiyar and Meenar rivers up-stream of the offtake hitherto proposed which will serve to show whether an offtake can be found which will answer for an open channel throughout, or for one with a small amount of tunnelling.

(iii) The catchment areas of the likely sources of supply.

(iv) Sites suitable for storage, provided the Periyar lake will not answer either with or without raising of the existing dam at less cost than additional work elsewhere of this class.

The survey of the ridge lines is necessary, and I am sorry that this work was stopped through a misunderstanding.

4. *Periyar reservoir storage capacity.*—Storage requirements and possibilities remain to be investigated, if raising of the Periyar dam would meet requirements, it may be considered whether this could be effected at less cost with horizontal arches and buttresses on the down stream side, than by separate works; however storage works may be required for offtake purposes.

5. *Requisite extra storage.*—My note, dated 26th March 1906, shows as follows—

Gross commanded area	768,000 acres	
Culturable area	109,000 ,,	approximately.
Annual irrigation	157,000 ,,	

There is therefore abundant scope for extension of irrigation.

6. *Expenditure which would be justifiable.*—This will depend on the extra possible storage with the cost of providing the same, the cost of other works, and the estimated extra revenues; this question may now be investigated independently of the field work, since it may afford data which will at once serve to show whether very costly works are warrantable.

7. *Cost of tunnelling.*—On the Kalka-Simla Railway there are over 100 tunnels, and the experience gained there and on the Periyar tunnel shows as follows for the cost of blasting and removing of the rock; lining with brick-work would be extra.

Length of tunnel.	Cost per cubic foot.
Kalka-Simla Railway.	
MILES.	RS. A.
0 to ¼	0 5
¼ to ½	0 6
½ to ¾	0 8
¾ to 1	0 12
1 to 2	0 14
Periyar tunnel.	
1·08	0 12

8. In the case of a 3-mile tunnel the cost of the rock work alone is likely to be from Rs. 1-2-0 to Rs. 1-4-0 per cubic foot; the area of the tunnel is unlikely to be less than 60 square feet, and may be twice as much if the tunnel has to be lined with brick-work. The cost of an unlined 3-mile tunnel, together with cost of buildings, and percentage charges for establishment and tools and plant, is unlikely to be less than Rs. 16,00,000 while that of a lined one may amount to over Rs. 35,00,000. Nothing is stated as to the character of the rock, and whether lining with brick-work will be necessary. The local officers who are circumstanced to arrive at more correct estimates of the probable cost may estimate the cost differently; however their estimates are very unlikely to be such as to warrant a very costly work of this character being contemplated, when any chance of avoiding it remains to be investigated.

9. *Approximate estimate of cost of works.*—No rough estimate of the cost of works has apparently been attempted, although the data now available would apparently serve to admit of a preliminary one being prepared for the project as now proposed. The preparation of a rough estimate of this character would be useful to the local officers, since it would serve to show what works are permissible, and what will be prohibitive; however, even if the revenue prospects would warrant a 3-mile tunnel it is clearly advisable to establish beyond any doubt whether this work can be dispensed with.

10. *Gauging of the water.*—I need not say that it is advisable to continue gauging the water

11. *Conclusion.*—In conclusion I would recommend as follows :—

(i) Execution of surveys—*vide* paragraph 3 *supra.*
(ii) Carrying out of the investigations—paragraphs 4 to 6 and 9 *supra.*
(iii) The continued gauging of the available water-supply.
(iv) Submission of a preliminary report with rough estimate of probable cost, probable revenues, return on capital expenditure, and opinion of the Madras Government on the advisability of preparing a detailed project.

J. BENTON,
Inspector-General of Irrigation.

Order—No. 4 I., dated 10th January 1910.

The following letter will be despatched to the Government of India.

[Here enter letter No. 5 I., dated 10th January 1910.]

(True Extract.)

C. A. SMITH,
Joint Secretary to Govt., P.W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation
Copy to the Revenue Department } with copy of letter and notes.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

No. 5 I.

Irrigation.
Establishment.

LETTER—from

C. A. SMITH, ESQ.,

Joint Secretary to the Government of Madras,

Public Works Department.

Irrigation Branch.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

REVENUE AND AGRICULTURAL DEPARTMENT.

SIR,

I am directed to invite a reference to your letter No. 1060F./269-2, dated the 18th October 1909, conveying the approval of the Government of India to the proposal to have the catchment area of the Periyar lake surveyed by No. 19. Survey of India Party.

2. A scheme is now under the consideration of His Excellency in Council for supplementing the supply of water in the Periyar Reservoir by the diversion of the Pambiyar river into it, and I am to refer you to a note written by the Inspector-General of Irrigation in this connection, a copy of which was forwarded to this Government, with Mr. Jacob's letter No. 2,207-I., dated the 8th December 1908. It will be seen that Mr. Benton recommends the execution of certain surveys and the carrying out of investigations as regards storage requirements and possibilities and other matters connected with the scheme. Now that the Government of India are arranging to have the catchment area of the Periyar surveyed by one of the Survey of India Parties, the Chief Engineer considers it highly desirable that the Pambiyar catchment should be surveyed at the same time. This survey is an essential preliminary to the scheme, and should be carried out before the investigations indicated in the Inspector-General's note are undertaken, if satisfactory results are to be obtained.

3. I am in these circumstances directed to request that the Government of India will be pleased to arrange for this survey also being carried out by No. 19. Survey of India Party.

I have the honour to be,

Sir,

Your most obedient servant,

C. A. SMITH,

Joint Secretary to Government, P.W.D.,

Irrigation Branch.

MADRAS,

10th January 1910.

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

NOTES CONNECTED WITH G.O., Nos. 4, 5 I., DATED 10TH JANUARY 1910.

[SUBJECT.—*Investigation of the Periyar-Pambiyar project.*]

From the Government of India, dated 8th December 1908, *No.* 2207-*I.*

Joint Secretary—

The investigation of the Pambiyar scheme was undertaken in November 1906 at the instance of the Government of India.

Vide G.O., No. 126 I., dated 18th March 1907.

The result of work done by Mr. Murray, Executive Engineer, the officer deputed for the purpose, up to April 1907, is given in the report printed on pages 3 and 4 of G.O., No. 280 I., dated 18th June 1907, and that to the end of March 1908 on pages 3 to 5 of G.O., No. 226 I., dated 17th June 1908. Mr. Murray was of opinion that the Pambiyar could be diverted into the Periyar and that the following works would be necessary:—

(*a*) a dam across the Pambiyar,
(*b*) a tunnel from the Meenar to the Kullar valley, and
(*c*) a dam across the Kullar.

From the nature of the country an open channel was considered impossible and a tunnel was the only alternative. The investigation was stopped at the end of March 1908 as it was understood that Mr. Benton, Inspector-General, personally told the acting Chief Engineer for Irrigation (Mr. Clerk), that the cost of the tunnel proposed by Mr. Murray would be prohibitive. The permanent Chief Engineer for Irrigation (Mr. Smith), while of opinion that the results of the investigation did not justify the final abandonment of the scheme, recommended that further investigation should be deferred until the river was gauged for a sufficient number of years. The Government accepted this recommendation and directed the Superintending Engineer, VI Circle, to continue the gaugings accordingly. A copy of the proceedings was also forwarded to the Government of India for information.

2. The Government of India now forward copy of a note by the Inspector-General and request that the recommendation of that officer may be given effect to.

3. The Inspector-General points out that surveys are required to show—

(*a*) the location of the main watersheds and levels of the lower portions of these in the portions where it may probably be desired to bring an open supply channel or one with a moderate amount of tunnelling across to the next valley;

(*b*) levels at intervals of the Pambiyar and Meenar rivers up-stream of the off-take hitherto proposed which will show whether an off-take can be found which will answer for an open channel throughout or for one with a small amount of tunnelling;

(*c*) the catchment areas of the likely sources of supply;

(*d*) sites suitable for storage, provided the Periyar lake will not answer either with or without raising of the existing dam at less cost than additional work elsewhere of this class;

and suggests—

(*e*) The survey of the ridge lines which was stopped through a misunderstanding.

(*f*) Investigation of the storage requirements and possibilities. If the raising of the Periyar dam would meet requirements, it should be considered whether this could be effected at less cost with horizontal arches and buttresses on the downstream side than by separate works; storage works being however required for offtake purposes.

(*g*) Determination of the justifiable expenditure which would depend upon extra possible storage with the cost of providing the same, the cost of other works and the estimated extra revenue. The Inspector-General suggests that this question may be investigated independently of the field work as it may afford data which would show whether costly works are warrantable.

(*h*) The preparation of a rough estimate for the project as now proposed which would show what works are permissible and what prohibitive. Even if the revenue prospects would warrant a three mile tunnel, the Inspector-General thinks that it would be advisable to establish beyond doubt whether this work could be dispensed with.

(*i*) The continued gauging of the river.

(*j*) The submission of a preliminary report with rough estimate of probable cost, probable revenues, return on capital expenditure and the opinion of the Madras Government as to the advisability of preparing a detailed project.

4. Orders are requested whether the Superintending Engineer may be asked to submit proposals for establishment required to carry out the Inspector-General's instructions and to undertake the preliminary investigation of the Cardamom Hills project suggested by Mr. Medlicott regarding which the Travancore Government is being addressed for permission and also the investigation of the ridge north and south of Periyar which the Chief Engineer for Irrigation thought might be taken up when the reinvestigation of Pambiyar is taken in hand.

5. With reference to paragraph 13 of the joint report at page 6 of G.O., No. 1780, Revenue, dated 16th July 1907, it is understood from the Revenue Department that it is proposed to have the area surveyed by the Government of India Survey Party.

S.D.
8-1-09.

G.E.B.
8-1-09.

Mr. Clerk, Superintending Engineer, VI Circle, will be up here about the middle of the month and I will discuss this question with him.

Meantime send the attached note to Revenue.

C. A. SMITH.
8-1-09.

This must lie over till the result of the correspondence between Revenue and India about surveying the Periyar catchment is known. From what Mr. Noyce told me it is likely that the survey will be carried out.

C.A.S.
23-1-09.

To lie over.

S.D.
23-1-09

T. W. S. SMYTH.
23-1-09.

Ask Revenue whether any progress has been made with regard to the proposed survey.

C.A.S.
31-3-09

Under Secretary—

With reference to paragraph 13 of the joint report on page 6 of G.O., No. 1780, Revenue (Confidential), dated 16th July 1907, will Revenue please state whether any and, if so, what progress has been made with regard to the proposed survey of the Periyar catchment by the Government of India Survey Party.

G.V.
31-3-09.

S.S.
31-3-09.

T.W.S.S.
1-4-09

To the Revenue Department u.o.

REVENUE DEPARTMENT.

Assistant Secretary—

A reference has been made on the subject to the Travancore Darbar. No reply appears to have been received yet from the Resident. Arrangements will be made for the survey by the Government of India Survey Party on receipt of the Darbar's views in the matter. The Public Works Department may, it is submitted, be informed accordingly through Political.

C.R.V.
3-4-09.

Where is the file on the subject?

F. NOYCE.
3-4-09.

Assistant Secretary—

Our file on the subject is now in Political.

C.R.V.
3-4-09

Will Political kindly send it to the Public Works Department (Irrigation) for perusal?

F.N.
4-4-09.

To the Political Department u.o.

POLITICAL DEPARTMENT.

Under Secretary—

The file is placed herewith. It may be sent to the Public Works Department (Irrigation) for perusal and favour of return.

H.T.
7-4-09.

A. GALLETTI.
7-4-09.

To the Public Works Department (Irrigation) u.o.

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

Under Secretary—

The Political Department file may be seen and returned with thanks.

2. This file may lie over for four months.

B.G.R.
8–4–09.

S.S.
9–4–09.

T.W.S.S.
21–4–09.

C.A.S.
21–4–09.

This must lie over till the result of the correspondence between Revenue and India about surveying the Periyar catchment is known.

C.A.S.
23–5–09.

Find out how this is getting on please.

T.W.S.S.
17–6–09.

Under Secretary—

Revenue may be asked to state in what stage the matter now is.

G.V.
18–6–09.

M.S.V.
18–6–09.

T.W.S.S.
18–6–09.

Demi-official from H. A. B. VERNON, *Esq.*, *I.C.S.*, *Private Secretary to His Excellency the Governor, to* C. A. SMITH, *Esq.*, *Joint Secretary to Government, Public Works Department* (*Irrigation*), *dated Ootacamund, 19th June* 1909, *No.* 814.

"His Excellency wishes to see the file relating to the Pambiyar project which was investigated by Mr. S. B. Murray."

Head Clerk—

Is the file here ? If not, wire for it and meantime a copy of the Government order passing orders on it may go to His Excellency. Attend to this now.

C.A.S.
19–6–09.

Joint Secretary—

The file which was despatched to Revenue this morning has been recovered and submitted with a demi-official to the Private Secretary to His Excellency the Governor.

M.S.V.
19–6–09.

Demi-official from C. A. SMITH, Esq., Joint Secretary to Government, Public Works Department (Irrigation), to H. A. B. VERNON, Esq., I.C.S., Private Secretary to His Excellency the Governor, dated Ootacamund, the 19th June 1909, No. 97-C.

"With reference to your demi-official No. 814 of date, I herewith send the file connected with the investigation of the Periyar-Pambiyar project, Madura district."

Demi-official from H. A. B. VERNON, Esq., I.C.S., Private Secretary to His Excellency the Governor, to A. G. CARDEW, Esq., I.C.S., Secretary to Government, Revenue Department, dated 20th June 1909, No. 818.

"I return herewith the file regarding the Periyar-Pambiyar project.

His Excellency wishes to see the file again when the result of the correspondence about the survey of the catchment area is known, and desires that the matter may be expedited as far as possible."

Under Secretary—

A draft letter of the Revenue Department to the Government of India on the subject of the survey of the catchment area of the lake has just been returned accepted by this department. The file may continue to lie over.

M.S.V.
24-7-09.

Lie over.

T.W.S.S.
24-7-09.

Under Secretary—

The Government of India have approved the proposal that the survey of the catchment area of the Periyar lake should be undertaken by one of the Survey of India Parties, and have arranged that the triangulation of this area should be carried out by No. 19 Survey Party during the ensuing season and the detail survey during the field season 1910-1911. The Resident has been requested in G.O., No. 2903, Revenue, dated 22nd October 1909, to urge upon the Travancore Darbar the necessity for commencing operations preliminary to survey at once. The file may be resubmitted to His Excellency for perusal with reference to the Private Secretary to His Excellency the Governor's demi-official above.

J.M.L.

K.P.A.
6-11-09.

Orders are required on Government of India's letter No. 2207 I., dated 8th December 1908, which has been lying over pending the result of the correspondence about the survey of the Periyar catchment area.

S.S.
6-11-09.

Can Technical Section note what orders have already been passed? I understand that an automatic recording gauge with gauge house has been ordered.

J. M. Lacey.
9-11-09.

Under Secretary—

The letter No. 2207 I., dated 8th December 1908, was lying over till the result of the correspondence between the Revenue and India about surveying the Periyár catchment was known. However, as per G.O., No. 226 I., dated 17th June 1908,

the Superintending Engineer, VI Circle, has made arrangements to continue the gaugings of the Pambiyar and submitted the records of water readings and the rainfall of the Pambiyar river during the year 1908–1909. In this office R.O.C. No. 1103, dated 19th October 1909, the Superintending Engineer was asked to rectify some mistakes noticed in the gaugings and to construct the automatic records at an early date. Now the Government of India have approved of the proposal to A | survey the Periyar catchment by one of the Survey of India Parties, it appears | highly desirable to have the Pambiyar catchment surveyed at the same time—*vide* paragraph 6 of the Chief Engineer for Irrigation's note, page 16 in G.O., No. 226 I., dated 17th June 1908. Until the survey is carried out it seems very difficult to carry out the investigations indicated in the Inspector-General's note forwarded with the Government of India letter No. 2207 I., dated 8th December 1908, and the results too are not likely to be satisfactory if investigations are pursued before the survey is made.

N.S.
9-11-09.

J.M.L.
9-11-09.

A. This must be arranged for at once, but I think it should be done by the Survey of India as part of their legitimate work and not as specially on behalf of Irrigation Nothing else can be done at present.

H. E. CLERK.
12-11-09.

Under Secretary—

A draft letter to the Government of India is submitted for approval. It may go to Revenue before issue.

2. It is understood that further action on this case is to await the survey.

K.P.A.
16-11-09.

J.M.L.
19-11-09.

The portion of letter regarding payment must be amplified. I want to know who paid for the topographical survey of Native States such as Travancore, Mysore and Hyderabad. My belief is that when the Survey of India was started the department undertook the whole survey and we are now only asking them to complete work which was left undone. Is any information on this point available?

H.E.C.
19-11-09.

Joint Secretary—

The office has not been able to collect any information on the point raised above. Submitted that the Revenue Department may be consulted.

K.P.A
23-11-09.

S.S.
23-11-09.

What I want to know is whether we can reasonably ask the Government of B | India, Survey Department, to complete the survey of that part of the hills in | which the Pambaiyar is situated as part of their ordinary work. My contention is that it is work which they have undertaken and left incomplete. We do not want an elaborate survey on a large scale; that of the ordinary topographical survey 1′ = 4 miles would suffice.

If not paid for by the Survey of India it would presumably be treated like other investigations, *i.e.*, charged to 43 or 45 and if the estimate were sanctioned, written back to the preliminary expenses of the project. I shall be much obliged if Revenue can give any information on the point marked **B** above.

H.E.C.
23-11-09.

To the Revenue Department u.o.

REVENUE DEPARTMENT.

Assistant Secretary—

There is no map in Revenue to show where the hills referred to by the Public Works Department (Irrigation) are situated.

2. Please see paragraph 39 of Introduction to the Revised Survey Manual. The Government of India have decided that a fresh topographical survey of the whole of India should be made by the Survey of India Department. This survey commenced in the Madras Presidency in 1907. It may therefore be expected that these hills will be surveyed in due course. The Public Works Department (Irrigation) wants however that this survey should be given preference and finished soon. There does not appear to be any objection to asking India to arrange for the early survey of the Pambiyar catchment area as part of their ordinary work.

Page xxv of the Manual.

C.R.V.
2-12-09.
D.A.
3-12-09.

What the Secretary, Public Works Department (Irrigation), wants is whether the Survey of India will do this work as a part of their legitimate work or whether they will regard it as outside their province. Have we any information on this point? If we have none, we shall have to say point blank that we have none. Please examine this point.

S. VENKATARAMADAS.
4-12-09.

Assistant Secretary—

It is submitted that there is no information available in this office to say whether the Survey of India will do the work referred to by the Secretary, Public Works Department (Irrigation), as a part of their legitimate work or whether they will regard it as outside their province.

S.V.R.
8-12-09.

D.A.
7-12-09.

Secretary—

I submit that the file may be sent to the Public Works Department (Irrigation) with the remark that there is no information in this department on the point raised.

S.V.R.
8-12-09.

Where is Revenue letter No. 2177, dated 7th August 1909? G.O., No. 2176 is put up but not the letter.

2. Have we no selection from the records giving the scope of the Survey of India's work and showing whether it includes Native States?

A. G. CARDEW.
8-12-09.

Assistant Secretary—

Letter No. 2177, Revenue, dated 7th August 1909, is now submitted.

2. No selection from the records giving the scope of the Survey of India's work is traceable. G.O., No. 600, Revenue, dated 12th March 1907, contains the scheme outlined by the Government of India for the revision and reproduction of the topographical maps of India. From paragraph 4 of Government of India's letter No. 3—151—3, dated 11th January 1907, it is plain that Native States come within the scope of the Survey of India's work. If the survey referred to by the Public Works Department (Irrigation) comes under "Forest Survey", the Surveyor-General may be requested to make special arrangements. Please see clause (4) in paragraph 10 of the letter printed at page 5 of G.O., No. 600, Revenue, dated 12th March 1907.

Printed at page 3 of G.O., No. 600, Revenue, dated 12th March 1907.

D.A.
13-12-09.

Secretary—

S.V.R.
14-12-09.

I think the Government of India may be asked to have the work in question done by the Survey of India as part of its ordinary functions.

A.G.C.
15-12-09.

To the Public Works Department (Irrigation) u.o.

Public Works Department
(Irrigation Branch).

Under Secretary—

Submitted.

2. It would perhaps be better to alter the last part of paragraph 3 of the draft letter as follows:—"as part of its ordinary functions, if the work has not already been included within the scope of operations of the Survey of India".

3. The file may be submitted to His Excellency with reference to the note at the foot of page 5 above.

K.P.A.
16-12-09.

I do not find in the correspondence with India relating to the Periyar catchment survey any mention of payment, and I do not therefore see any reason for supposing that the Government of India Survey intends to charge us for making the survey

As it has been decided to have that survey whether we have to pay for it or not and as the conditions are practically the same for the Pambiyar survey I doubt if it is advisable to make any reference in the present draft to payment.

If and when India asks us to pay we can if necessary dispute it but it seems to me that to make a reference to it now is likely to encourage India to make a claim which they might not have otherwise thought of doing.

If Revenue agree, the last paragraph of the draft may be omitted. If the surveys in question do not legitimately come within the scope of the Survey of India's ordinary work, we shall have to pay and in that case Irrigation must pay but I hope we shall not be asked to pay at all.

C.A.S.
18-12-09.

To the Revenue Department u.o.

REVENUE DEPARTMENT.

Assistant Secretary—

The draft letter to India may, it is submitted, be accepted in Revenue, subject to the amendment proposed by the Chief Engineer to the concluding portion of paragraph 3 of the letter.

D.A.
21-12-09.
C.R.V.
21-12-09.

Secretary—

Revenue may, I submit, agree with the Chief Engineer for Irrigation that there is no need to say anything which might lead to a claim for payment and that it is sufficient to wait until the Government of India move in the matter.

F. NOYCE.
22-12-09.

I quite agree that the *last sentence of paragraph* 3 should be omitted; in fact, I began a remark to this effect in my note of the 15th but did not complete it. I would not omit the whole of paragraph 3 but would end at the words "by No. 19 Survey of India Party".

A.G.C.
23-12-09.

To the Public Works Department (Irrigation) u.o.

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

Under Secretary—

The draft may be altered accordingly and the file submitted to His Excellency.

K.P.A.
3-1-10.
S.S.
3-1-10.

J.M.L.
3-1-10.

Note for His Excellency—

The file relates to the investigation of the Periyar-Pambiyar project. This is the scheme for diverting the Pambiyar river into the Periyar lake which was partially investigated by Mr. Murray. It had to be given up temporarily for want of sufficient data as to the quantity of water available. Now that the Government of India have agreed to put on a survey party to survey the catchment of the Periyar, it is very desirable to have the Pambiyar catchment surveyed at the same time and a draft letter to India to this effect is submitted for approval.

C.A.S.
3-1-10.

Approved.

A. L[AWLEY].
6-1-10.

Under Secretary—

The letter with the Government order may now issue.

K.P.A.
7-1-10.

S.S.
7-1-10.

Issue.

To be shown to the Joint Secretary on return.

J.M.L.
8-1-10.

[Seen by Joint Secretary.]

[Issued as G.O., Nos. 4, 5 I., dated 10th January 1910.]

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10/3